Abstracts

Microstrip and stripline ferrite-coupled-line (FCL) circulator's

Cham Kiong Queck and L.E. Davis. "Microstrip and stripline ferrite-coupled-line (FCL) circulator's." 2002 Transactions on Microwave Theory and Techniques 50.12 (Dec. 2002 [T-MTT] (Special Issue on 2002 International Microwave Symposium)): 2910-2917.

Measurements on an 11-GHz four-port microstrip ferrite-coupled-line (FCL) circulator, employing a broad-band hybrid coupler and an improved air bridge, confirm that only a weak biasing field of 3-4 kA/m (35-50 Oe) is required. By cascading the S-matrices of the FCL section and hybrid coupler using signal flow graphs, the measured and predicted bandwidth and losses are compared for the first time. Simulated results for stripline FCL sections exhibit broader bandwidths than those obtained with microstrip FCL sections. Using such a structure, the simulated performance of a three-port circulator indicates that, in principle, bandwidths of at least 3:1 or 4:1 may be possible.

❑ Return to main document.